

Remarks

Claims 1-5 and 20 have been canceled and Claims 6-19 remain pending.

Claims 6-12 and 18-29 stand rejected under 35 U.S.C. §103(a) as being obvious from the teachings of Jaffray in view of Holupka and Zhang. Claims 13-17 similarly stand rejected under 35 U.S.C. §103(a) as being obvious from the teachings of Jaffray in view of Holupka, Zhang, and Tsuyuki.

Claim 6 is directed to a radiotherapy apparatus that processes two-dimensional radiation imaging to produce tomography data (i.e., three-dimensional imaging data). The tomography data provides sectional views containing pixels derived from averaging voxels from the tomography data which are disposed transversely to the sectional view. A therapeutic source can be controlled according to this arrangement to produce therapeutic radiation. Claim 6 also requires that there be a plurality of section views that intersect “substantially at the isocenter of the therapeutic source.” Such an arrangement is not taught or suggested by the prior art.

Reviewing the latest Office action, Applicant does not see where the Examiner addressed the requirement of Claim 6 that there be a plurality of section views that intersect “substantially at the isocenter of the therapeutic source.” Point 5 of the Office action concedes that the primary reference, Jaffray, does not describe a computing means as required by Claim 6 which produces a plurality of sectional views. And the Zhang reference is cited for no more than teaching obtaining pixel values by averaging voxels.

Nor does Holupka teach or suggest such an arrangement. In fact, Holupka relates primarily to a method of imaging using ultrasound waves (see the Abstract, for example). The only teaching relevant to CT scanning is on column 4, lines 37–39: “The probe preferably is an

ultrasound device but can be any other rapid imaging technology such as rapid CT or MR.” Thus Holupka relates only to a probe which is inserted into the patient, which may have an ultrasound imager, a CT imager or an MR imager. But Holupka lacks any teaching or suggestion that the sectional views intersect at the isocentre of the therapeutic source.

Not only does not Holupka provide any suggestion of such a feature, it cannot. The isocentre is a concept which applies to rotational radiation sources and is understood in the art to correspond to the geometrical location which lies on or near the axis of rotation of the source, and therefore generally lies in the field of view of the radiation beam throughout rotation of the source. *See, e.g., specification, page 5, first paragraph and Fig. 1.* Holupka quite simply has no such isocentre since the source of radiation is actually inserted into the patient. Thus, like Jaffray and Zhang, Holupka fails to teach or suggest a computing means as required by Claim 6 which processes a plurality of section views that intersect “substantially at the isocenter of the therapeutic source.”

Thus, no combination of Jaffray, Holupka and/or Zhang teaches or suggests the arrangement required by Claim 6, which is therefore allowable. Claims 7 to 20 are all dependent on Claim 6 and are therefore allowable for the same reasons. Reconsideration of the claims and issuance of a Notice of Allowance is respectfully requested.

Conclusion

Applicant believes that no extension of time is required; however, this conditional petition is made to provide for the possibility that the applicant has inadvertently overlooked the need for an extension of time. If any additional fees are required for the timely consideration of

this application, please charge deposit account number 19-4972. It is submitted that all the claim rejections have been addressed and that all of the pending claims are now in a condition for allowance. Reconsideration of the application and issuance of a notice of allowance are respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is invited to call applicants' attorney at the telephone number listed below.

Respectfully submitted,

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